

UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No.	211909US2 CIP
First Inventor or Application Identifier	Atsumi YASUUCHI
Title	METHOD OF MANUFACTURING SEMICONDUCTOR DEVICE
Assignee Name:	Mitsubishi Denki Kabushiki Kaisha
Assignee Address:	2-3, Marunouchi 2-chome, Chiyoda-ku, TOKYO 100-8310 JAPAN

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents

ADDRESS TO: Assistant Commissioner for Patents
Box Patent Application
Washington, DC 20231

Fee Transmittal Form (e.g. PTO/SB/17)
(Submit an original and a duplicate for fee processing)

ACCOMPANYING APPLICATION PARTS

2. ☒ Specification Total Sheets **57**
3. ☒ Formal Drawing(s) (35 U.S.C. 113) Total Sheets **45**
4. ☒ Oath or Declaration Total Pages **3**
 - a. ☐ Newly executed (original or copy)
 - b. ☐ Copy from a prior application (37 C.F.R. §1.63(d)) (for continuation / divisional w/ box 17 completed)
 - i. ☐ DELETION OF INVENTOR(S)
Signed statement attached deleting inventor(s) named in the prior application, see 37 C.F.R. §1.63(d)(2) and 1.33(b).
 - c. ☐ CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)
 - d. ☐ Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
 - a. ☐ Computer Readable Form (CRF)
 - b. Specification or Sequence Listing on:
 - i. ☐ CD-ROM or CD-R (2 copies); or
 - ii. ☐ Paper
 - e. ☐ Statements verifying identity of above copies

7. ☒ Assignment Papers (cover sheet & document(s))
8. ☒ Application Data Sheet. See 37 CFR 1.76
9. ☐ 37 C.F.R. §3.73(b) Statement (when there is an assignee) ☐ Power of Attorney
10. ☐ English Translation Document (if applicable)
11. ☒ Information Disclosure Statement (IDS)/PTO-1449 ☒ Copies of IDS Citations (2)
12. ☐ Preliminary Amendment
13. ☒ White Advance Serial No. Postcard
14. ☐ Certified Copy of Priority Document(s) (if foreign priority is claimed)
15. ☐ Applicant claims small entity status. See 37 CFR 1.27
16. ☒ Other: Request for Priority
Statement of Relevancy

17. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below:

☐ Continuation ☐ Divisional ☒ Continuation-in-part (CIP) of prior application no.:
Prior application information: Examiner: Not Assigned Group Art Unit: 1765

For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 4b, is considered a part of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

18. Amend the specification by inserting before the first line the sentence:

- ☒ This application is a ☐ Continuation ☐ Division ☒ Continuation-in-part (CIP)
of application Serial No. 09/668,382 Filed on September 25, 2000,
☐ Which was published in English
☐ Which was not published in English
☐ This application claims priority of provisional application Serial No. Filed

19. CORRESPONDENCE ADDRESS



22850

(703) 413-3000

FACSIMILE: (703) 413-2220

Name:	Gregory J. Maier	Registration No.:	25,599
Signature:	<i>Surinder Sachar</i>	Date:	7-27-01
Name:	Surinder Sachar	Registration No.:	34,423

Docket No. 211909US2 CIP

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

INVENTOR(S) Atsumi YAMAGUCHI et al.

SERIAL NO: New Application

FILING DATE: Herewith

FOR: METHOD OF MANUFACTURING SEMICONDUCTOR DEVICE

FEE TRANSMITTAL

ASSISTANT COMMISSIONER FOR PATENTS
WASHINGTON, D.C. 20231

FOR	NUMBER FILED	NUMBER EXTRA	RATE	CALCULATIONS
TOTAL CLAIMS	18 - 20 =	0	× \$18 =	\$0.00
INDEPENDENT CLAIMS	3 - 3 =	0	× \$80 =	\$0.00
<input type="checkbox"/> MULTIPLE DEPENDENT CLAIMS (If applicable)			+ \$270 =	\$0.00
<input type="checkbox"/> LATE FILING OF DECLARATION			+ \$130 =	\$0.00
BASIC FEE				\$710.00
TOTAL OF ABOVE CALCULATIONS				\$710.00
<input type="checkbox"/> REDUCTION BY 50% FOR FILING BY SMALL ENTITY				\$0.00
<input type="checkbox"/> FILING IN NON-ENGLISH LANGUAGE			+ \$130 =	\$0.00
<input checked="" type="checkbox"/> RECORDATION OF ASSIGNMENT			+ \$40 =	\$40.00
TOTAL				\$750.00

- ☐ Please charge Deposit Account No. 15-0030 in the amount of _____ A duplicate copy of this sheet is enclosed.
- ☒ A check in the amount of **\$750.00** to cover the filing fee is enclosed.
- ☒ The Commissioner is hereby authorized to charge any additional fees which may be required for the papers being filed herewith and for which no check is enclosed herewith, or credit any overpayment to Deposit Account No. 15-0030. A duplicate copy of this sheet is enclosed.

Respectfully Submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.

Date: 7-27-01



Gregory J. Maier
Registration No. 25,599

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(OSMMN 10/00)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: Atsumi YAMAGUCHI et al.

GAU:

SERIAL NO: New Application

EXAMINER:

FILED: Herewith

FOR: METHOD OF MANUFACTURING SEMICONDUCTOR DEVICE

REQUEST FOR PRIORITY

ASSISTANT COMMISSIONER FOR PATENTS
WASHINGTON, D.C. 20231

SIR:

- ☒ Full benefit of the filing date of U.S. Application Serial Number 09/668,382, filed September 25, 2000, is claimed pursuant to the provisions of 35 U.S.C. §120.
- ☐ Full benefit of the filing date of U.S. Provisional Application Serial Number , filed , is claimed pursuant to the provisions of 35 U.S.C. §119(e).
- ☒ Applicants claim any right to priority from any earlier filed applications to which they may be entitled pursuant to the provisions of 35 U.S.C. §119, as noted below.

In the matter of the above-identified application for patent, notice is hereby given that the applicants claim as priority:


<u>COUNTRY</u>	<u>APPLICATION NUMBER</u>	<u>MONTH/DAY/YEAR</u>
JAPAN	P2000-110603	APRIL 12, 2000
JAPAN	P2001-051447	FEBRUARY 27, 2001

Certified copies of the corresponding Convention Application(s)

- ☐ are submitted herewith
- ☐ will be submitted prior to payment of the Final Fee
- ☒ were filed in prior application Serial No. 09/668,382, filed September 25, 2000.
- ☐ were submitted to the International Bureau in PCT Application Number .
Receipt of the certified copies by the International Bureau in a timely manner under PCT Rule 17.1(a) has been acknowledged as evidenced by the attached PCT/IB/304.
- ☐ (A) Application Serial No.(s) were filed in prior application Serial No. filed ; and
(B) Application Serial No.(s)
- ☐ are submitted herewith
- ☐ will be submitted prior to payment of the Final Fee

Respectfully Submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



Gregory J. Maier
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Docket No.

211909US2 CIP

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

INVENTOR(S) Atsumi YAMAGUCHI et al.

SERIAL NO: New Application

FILING DATE: Herewith

FOR: METHOD OF MANUFACTURING SEMICONDUCTOR DEVICE

JC857 U.S. PTO
09/915396
07/27/01

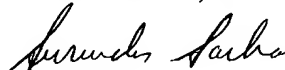
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ASSISTANT COMMISSIONER FOR PATENTS
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Respectfully Submitted,

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Registration No. 34,423

Date:

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IN RE APPLICATION OF: Atsumi YAMAGUCHI, et al.

SERIAL NO.: New Application

FILED: Herewith

FOR: METHOD OF MANUFACTURING SEMICONDUCTOR DEVICE



STATEMENT OF RELEVANCY

Reference AO (4-127518) on Form PTO-1449.

The following is English translation of an extract from the above-identified document relevant to the present application.

This invention relates to a semiconductor device manufacturing method having a step where an ion implantation is performed to a resist pattern and the size of the resist pattern is reduced according to the amount of ion implantation.

Reference AP (63-43319) on Form PTO-1449.

The following is English translation of an extract from the above-identified document relevant to the present application.

This invention relates to a pattern formation method with a process wherein ions of such as inert gas, carbon, silicon and metals are implanted into a resist pattern formed by a lithography process so that a carbon film with an excellent resistance against dry etching can be formed on the resist surface.